Informatics

Exam Revision

Course commenced 2016

**Unit 3 – Outcome 2**

**Key Knowledge (Chapters 2 & 3)**

**Data and information**

* primary and secondary data sources (digital and non-digital) and methods of data acquisition, including observation, interview and querying of resources
* distinguish between primary & secondary data. (p82)
* outline the listed methods of data acquisition and the advantages & disadvantages of each. (p94)
* suitability of quantitative and qualitative data for manipulation including comparisons (quantitative) and policy formation (qualitative)
* distinguish between qualitative and quantitative data. (p85)
* explain the suitability of each for different purposes.
* data types and data structures relevant to selected software tools
* why is data categorised into types?
* List some of the most common data types. (p1210
* Give some examples of different data structures for some of the software we have used. (p123)
* one of the following methods for referencing primary and secondary sources: Harvard, American Psychological Association (latest edition), Chicago, Institute of Electrical and Electronics Engineers (IEEE)
* choose one method of referencing and list the requirements of the style. (p107)
* criteria to check the integrity of data including timeliness, authenticity, relevance, accuracy
* why is data integrity important?
* Outline each of the factors that influence data integrity. (p111)
* techniques for coding qualitative data to support manipulation
* why is coding required for qualitative data? (p86)
* List some options for coding qualitative data.

**Interactions and impact**

* key legal requirements for storage and communication of data and information, including privacy, intellectual property and human rights requirements
* outline each of the six pieces of legislation including who it covers and what the requirements are. (p129)

**Approaches to problem solving**

* features of a reasonable hypothesis including a specific statement identifying a prediction and the variables
* what is a hypothesis? (p73)
* what are the characteristics of a reasonable hypothesis? (p75)
* solution specifications: requirements, including data to support the prediction of the hypothesis, constraints and scope
* list and explain what should be included in the solution requirements. (p79)
* list and explain what should be included in the solution constraints. (p80)
* list and explain what should be included in the solution scope. (p81)
* project management concepts and processes, including milestones and dependencies (concepts), task identification, sequencing, time allocation, resources and documentation using Gantt charts (processes)
* what is the purpose of project management?
* Outline the concepts and processes listed. (p134)
* file naming conventions to support efficient use of software tools
* explain the importance of using appropriate file naming conventions.. List some conventions. (144)
* software functions to organise, manipulate and store data
* why is it important for an organisation to efficiently and effectively manage data?
* List some strategies that can be used to assist with storing their data. (p147)
* techniques for identifying patterns and relationships between data
* what is the advantage of using different statistical concepts (such as mean or standard deviation) when working with large amounts of data? (p152)
* what is the purpose of using data visualisations when presenting data to an audience? (p157)
* how does using queries and searches (including sorting & filtering) assist when working with large amounts of data? (p159)

**Digital systems**

* roles, functions and characteristics of digital system components used to input, store, communicate and output data and information
* what are the two components of a digital system? (p165)
* Give examples of hardware used to input, store, communicate and output data and information. (p165)
* List some different types of software used during the year and explain its role and function. (p169)
* physical and software security controls suitable for protecting stored and communicated data.
* Explain the importance to an organisation of keeping its data and information secure. (p170)
* Distinguish between physical and software security. Give some examples of both types.